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**The Faculty of Computing, Engineering and the Built Environment (CEBE) is making major investments in growing the quality and volume of research across its two constituent Schools (Schools of Engineering and the Built Environment, and Computing and Digital Technology) through investments in academic staff and researchers, doctoral students and new labs, workshops and equipment.**

The [Water, Environment and Communities Research Centre](https://www.bcu.ac.uk/computing-engineering-and-the-built-environment/research/water-environment-and-communities) is located in the Faculty of Computing, Engineering and the Built Environment (CEBE) and based at our City Centre Campus. The Centre undertakes applied research on a range of contemporary themes relating to water and the environment reflecting the diversity and interdisciplinary nature of issues concerning the development of resilient communities. The Centre undertakes a portfolio of applied interdisciplinary research, knowledge exchange, education, community engagement and advice for decision makers and policy makers at all levels. The Centre’s work embraces and integrates local, national and international perspectives on water, focusing on environmental challenges towards sustaining resilient communities.

We have a range of PhD studentships now available across the range of disciplines represented in the centre. There are a limited number of funding opportunities available with some studentships including full scholarships while others having partial or self-funding options. Funding will be determined based on the strength of the candidate and quality of the proposal. Some of these projects also include support from our collaborating organisations.

**THE DEVELOPMENT OF A FRAMEWORK TO SUPPORT THE RESILIENCE OF COMMERCIAL PROPERTIES TO FLOODING**

**How to apply**

**The closing date for applications is 23.59 on Sunday 1 December 2019.**

To apply, please complete the [project proposal form](http://www.bcu.ac.uk/Download/Asset/1c822112-124b-e911-818d-005056831842) , **ensuring that you quote the project reference,** and then complete the [online application](https://www.bcu.ac.uk/courses/bsbe-research-degrees-phd-2018-19)  where you will be required to upload your proposal in place of a personal statement.

You will also be required to upload two references, at least one being an academic reference, and your qualification/s of entry (Bachelor/Masters certificate/s and transcript/s)

For international applicants, a valid English language qualification, such as International English Language Test System (Academic IELTS) or equivalent with an overall score of 6.5 with no band below 6.0, must be submitted with your application.

These studentships come with full fee waivers for both UK and international candidates. There will also be the opportunity for some paid teaching work of up to 180hrs per academic year. Exceptionally strong candidates may also be offered a bursary. Final funding arrangements will be determined based on the strength of the candidate and quality of the proposal. Some of these projects also include support from our collaborating organisations.

You can find further details on studying for a PhD and details of how to apply [here](https://www.bcu.ac.uk/courses/bsbe-research-degrees-phd-2018-19)

**Project title: THE DEVELOPMENT OF A FRAMEWORK TO SUPPORT THE RESILIENCE OF COMMERCIAL PROPERTIES TO FLOODING**

**REF: CEBE-RESFLO**

**Contact:**

The successful candidate will be supported by an interdisciplinary research team, consisting of Prof David Proverbs, [david.proverbs@bcu.ac.uk](mailto:david.proverbs@bcu.ac.uk) and Dr Hong Xiao. For further information please contact the Director of Studies, Prof David Proverbs, [david.proverbs@bcu.ac.uk](mailto:david.proverbs@bcu.ac.uk).

**Overview:**

Government policy on flood risk and previous research on flood resilience have up to now mainly focussed on residential properties. But greater attention is shifting to commercial properties and other critical infrastructure. According to the EA, 185,000 commercial properties are located in flood prone areas in England alone. These properties are valued at £801bn or 15.8% of the value of total buildings and 2.2 per cent of total assets in the UK (Bhattacharya, et al., 2013). Commercial properties have specific characteristics (size, scale, construction methods, business functions, customers, supply chain, etc.), and the financial loss from flooding to commercial properties can be significantly higher than that from the residential properties. This merits a targeted research on the resilience of commercial properties to flooding. This work would support the recently launched National Infrastructure Commission consultation to gather views as part of its new study into the resilience of the UK’s infrastructure network.

Proposed Research

• Review of BoK and literature around flood risk; impact on buildings; flood resilience; property level approaches; including UK and international knowledge and approaches

• Development of new framework to help understand, improve and measure the resilience of commercial property to flooding

This will enable UK’s commercial properties to cope with future changes, disruptions, shocks and accidents – from increased risks of flooding due to climate change.

**Person specification:**

Masters degree holders with a first degree in a relevant built environment subject such as building surveying / civil engineering / construction management / property management / real estate.

**References:**

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Lamond, J. , Bhattacharya-Mis, N, Chan, F., Kreibich, H, Montz, B. Proverbs, D. and Wilkinson, S. (2019) Flood risk insurance, mitigation and commercial property valuation, Property Management (in press)

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