UNIVERSITY OF CAMBRIDGE
Department of Engineering

CONSTRUCTION ENGINEERING MASTERS DISSERTATION ABSTRACT

The Urban lung - identifying today's barriers for Green Roofs in London.

The London Mayor's Climate Change Adaption Strategy, Managing Risks and Increasing Resilience 2011, proposes that all major new developments in London's Central Activity Zone policy area are required to have a green roof. There is obviously a major incentive from a planning perspective for developers and building owners in London to incorporate green roofs in their projects, but as this is not statute, not every new development or refurbishment project in London incorporates a green roof, despite the acknowledged inherent benefits a green roof can bring to the building and its environment.

The purpose of the research is to identify the actual barriers being faced by the developers and building owners in London, with the aim of increasing the inclusion of a green roofs in new-build and refurbishment building projects.

To start, the generally accepted barriers to the construction of green roofs were identified from academic literature, then policies and guidelines in place to support the application of green roofs considered, culminating with a review of green roofs in London. All of which, suggested and promoted the application of green roofs on an individual and aggregated basis across London.

Case study data collated from 17 green roof projects by the City of London in 2011, was reviewed and analysed to determine the actual barriers that were faced on the individual projects and the probability of their occurrence on future projects.

The findings indicate that the recent increase in knowledge and expertise in the UK green roof industry, along with supporting policies and edification tools in place, have resulted in green roofs becoming more accepted in the London by building developers / occupiers.

The study also identified that there are still instances of the 'accepted' barriers to the implementation of green roofs that are being faced: in particular, structural considerations on retrofit projects. In addition, there are new barriers that were identified: the planning requirement for retrofit green roof projects, and; a unique to London barrier, the influence of St Pauls Height restrictions (City of London, 2007).

St Paul's was found to be something of an oxymoron in respect to green roofs in London: it indirectly promoted the application of extensive green roofs, and; at the same time discouraged intensive green roofs; depending on the viewpoint.

It is acknowledged that the thesis focuses on one aspect: successfully implemented projects. The research would benefit from looking at projects that were not successful in making it to the construction phase, and understanding the barriers that stopped it. This would provide a more 'rounded' view.

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