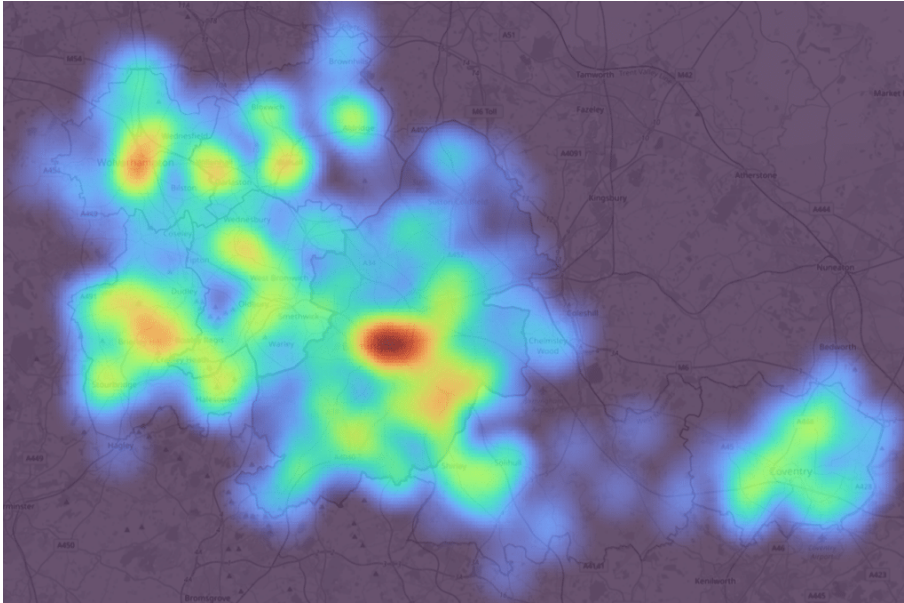


London South Bank University Leads Innovative Project to Unlock Urban Waste Heat Potential

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A groundbreaking research initiative led by London South Bank University (LSBU) has been launched to transform the management and utilization of waste heat generated by urban cooling systems. The Waste Heat Assessment and Resource Mapping (WHARM) project will focus on Birmingham as a key case study to identify and map this currently underutilized energy resource.

Funded by the Engineering and Physical Sciences Research Council (EPSRC) through the Reef-UKC network, the WHARM project aims to create a comprehensive georeferenced database of energy-intensive sectors, including data centres, supermarkets, cold storage facilities, and industrial sites. This detailed mapping will provide crucial insights into the quantity, quality, and location of waste heat produced, enabling a better understanding of its potential for on-site reuse or “export” to neighboring facilities.

The EPSRC, a leading UK funding body for engineering and physical sciences research, supports innovations that drive a sustainable and resilient economy. Reef-UKC, the research network facilitating the project, focuses on integrating renewable energy with clean cooling technologies to enhance energy efficiency and minimize environmental impact through system-level research and sustainable business models. The WHARM project is a collaborative effort between LSBU, Aston University, Birmingham City Council, Star Refrigeration, and Skilled Mapping.

Key Objectives of the WHARM Project:

- **Identification and Mapping:** To precisely identify, map, and characterize waste heat sources from cooling systems within Birmingham.
- **Economic Modeling:** To develop economic models quantifying the levelized costs associated with capturing and upgrading waste heat to various temperature levels.
- **Stakeholder Engagement:** To actively engage with stakeholders to understand existing challenges, such as high implementation costs, business model uncertainties, and mismatches between heat supply and demand.
- **Informed Decision Support:** To provide local authorities and businesses with the data and insights needed to make informed decisions when evaluating waste heat recovery and utilization opportunities.

Dr Henrique Lagoeiro, Research Fellow at LSBU and the project lead, commented: “The WHARM project is an exciting collaboration that brings together industry leaders and academic expertise to establish a data-driven blueprint for approaching waste heat. Ultimately, this initiative will build critical knowledge to support the decarbonization efforts of our cities and industries.”

Dave Pearson, Group Sustainable Development Director of Star Refrigeration and Royal Academy of Engineering Visiting Professor to Edinburgh Napier University, added: “While there is often anecdotal discussion about the significant amounts of waste heat generated, the WHARM project will provide the granular data – location, quantity, quality, and cleanliness – necessary to make informed decisions. This will allow us to advise on whether to efficiently upgrade the heat on-site using industrial heat pumps or make it available to neighboring users through district heat networks. Similar to materials recycling, our goal is to define a clear value proposition for waste heat, potentially even establishing it as a tradable commodity.”