Energy Mapping of Existing Building Stock in Cambridge using Energy Performance Certificates and Thermal Infrared Imagery

Yinglong Hea, b, c, [[1]](#footnote-2), Jiayu Panb, Ramit Debnathd, e, f, Ronita Bardhanb, 1, Luke Cullena, Marco Gomez Jenkinsa, Erik Mackiee, George Hawkera, Ian Parrya

b Institute of Astronomy, University of Cambridge, Cambridge, CB3 0HA, UK

c Department of Architecture, University of Cambridge, Cambridge, CB2 1PX, UK

a School of Mechanical Engineering Sciences, University of Surrey, Surrey, GU2 7XH, UK

d EPRG, Cambridge Judge Business School, University of Cambridge, Cambridge, CB2 1AG, UK

e Cambridge Zero, Department of Computer Science and Technology and Department of Architecture, Cambridge, CB3 OFD, UK

f Division of Humanities and Social Science, California Institute of Technology, Pasadena, 91125, US

# Appendix A

**Table A1.** GMM clustering of TIR data of individual building rooftops in Wolfson College (WC) and Peterhouse (PH)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Optical image** | **Resolutions (GSD, m/pixel)** | | | |
| **0.26** | **1** | **3** | **6** |
| WC-1 |  |  |  |  |
| WC-2 |  |  |  |  |
| WC-3 |  |  |  |  |
| WC-4 |  |  |  |  |
| WC-5 |  |  |  |  |
| WC-6 |  |  |  |  |
| WC-7 |  |  |  |  |
| WC-8 |  |  |  |  |
| WC-9 |  |  |  |  |
| WC-10 |  |  |  |  |
| WC-11 |  |  |  |  |
| WC-12 |  |  |  |  |
| WC-13 |  |  |  |  |
| WC-14 |  |  |  |  |
| WC-15 |  |  |  |  |
| WC-16 |  |  |  |  |
|  |  |  |  |  |
| PH-1 |  |  |  |  |
| PH-2 |  |  |  |  |
| PH-3 |  |  |  |  |
| PH-4 |  |  |  |  |
| PH-5 |  |  |  |  |
| PH-6 |  |  |  |  |
| PH-7 |  |  |  |  |
| PH-8 |  |  |  |  |
| PH-9 |  |  |  |  |
| PH-10 |  |  |  |  |
| PH-11 |  |  |  |  |
| PH-12 |  |  |  |  |
| PH-13 |  |  |  |  |
| PH-14 |  |  |  |  |
| PH-15 |  |  |  |  |

1. Corresponding authors (Email: [yinglong.he@surrey.ac.uk](mailto:yinglong.he@surrey.ac.uk), [rb867@cam.ac.uk](mailto:rb867@cam.ac.uk)) [↑](#footnote-ref-2)