

M4R (10230) Heat3D

Electric Pocket Ltd and Build Test Solutions Ltd have developed a new building performance assessment system as part of an existing Innovate UK funded project – Heat3D.

The system rapidly captures heat flow data from the building envelope.

In continuation of this work, and as part of the National Physical Laboratory (NPL) Measurement for Recovery (M4R) programme, a measurement review of the system has been completed. Through the M4R NPL explored the measurement procedure, traceability chain and uncertainties providing guidance on areas of development in measurement aspects of the Heat3D system currently in development.

The Heat3D system has been extensively tested by Electric Pocket and Build Test Solutions both in controlled situations in collaboration with the University of Salford's in their Energy House facility, but also for a wide range of field trial measurements using experienced experts with industry standard equipment – Heat Flux Plates – in accordance with existing standards. The controlled environment (Energy House) and field trial measurement data obtained from the Heat3D system and existing approach (HFPs) gave correlated results between the Heat3D system and HFP (Figure 1).

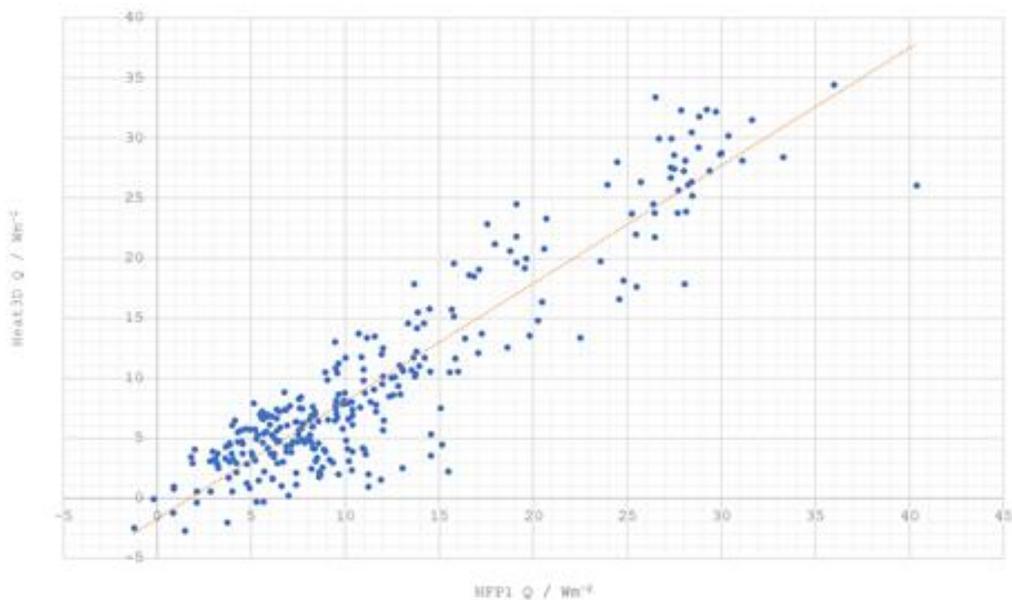


Figure 1: Field trial results showing a comparison of measured Heat Flow (Q) from industry standard Heat Flux Plate (HFP1) and the developed Heat3D system for a range of building structures