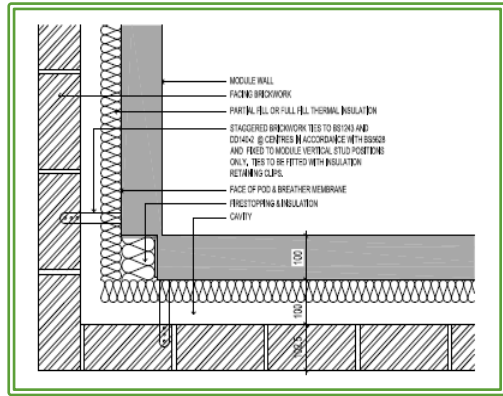




Ella Quigley PhD Researcher

Current practice is like a one way system:  
Knowledge about real building performance is rarely  
investigated or utilised.



Design



Construct

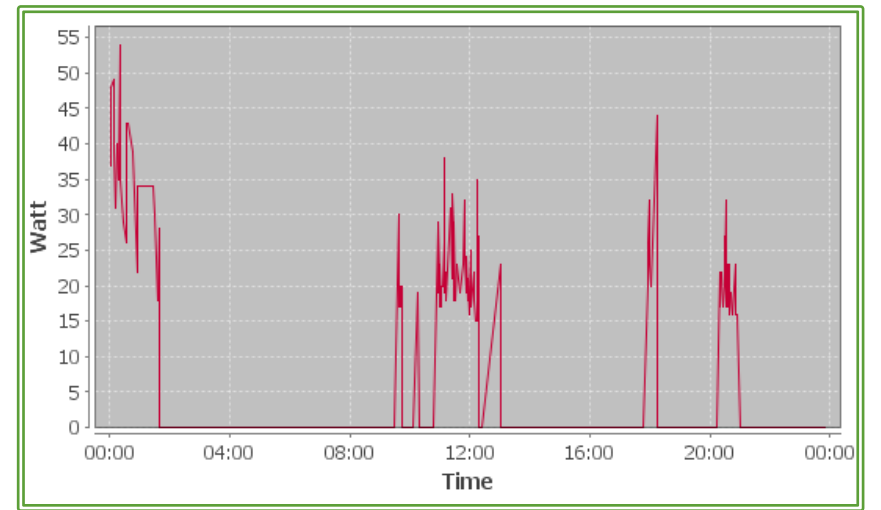
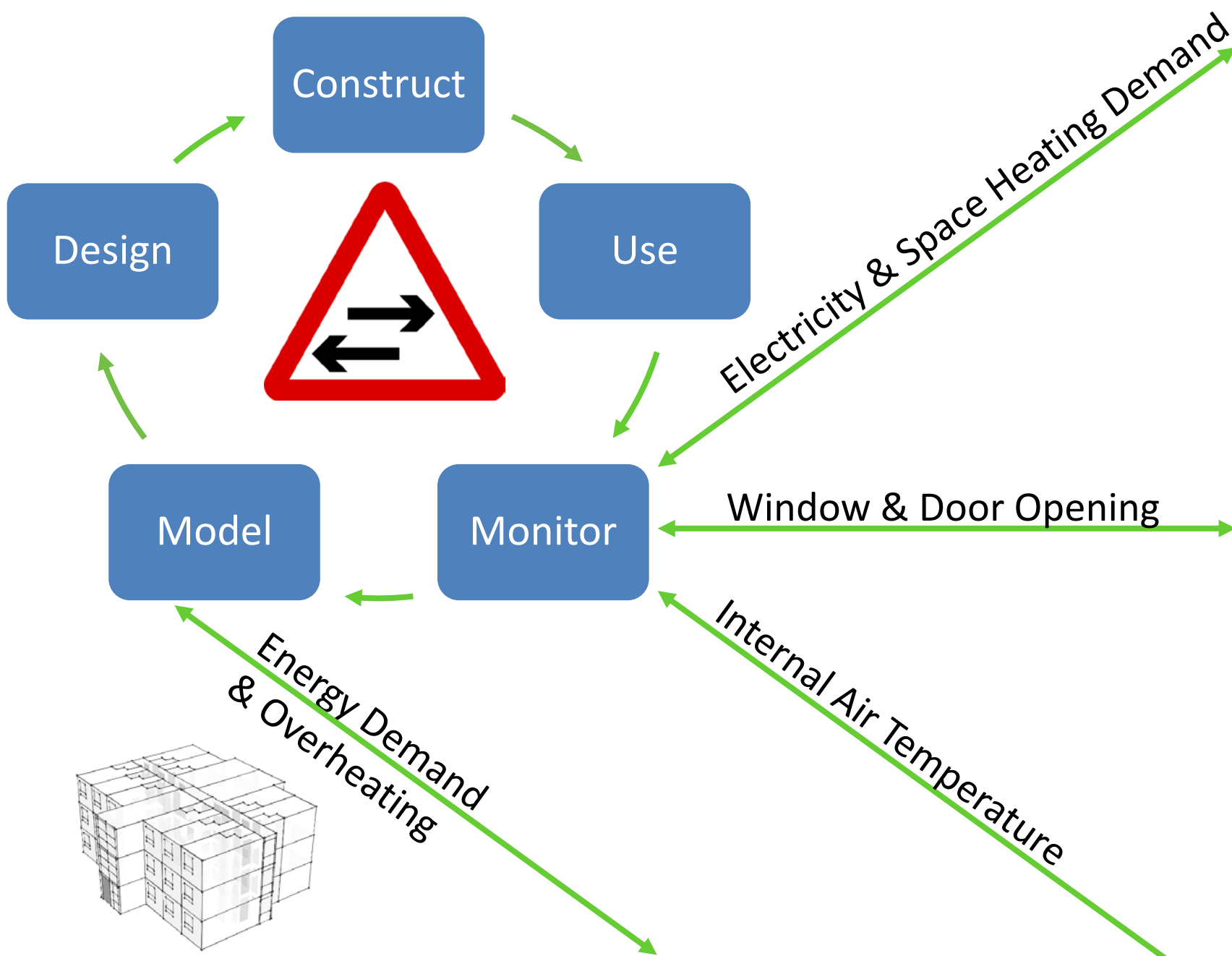


Use

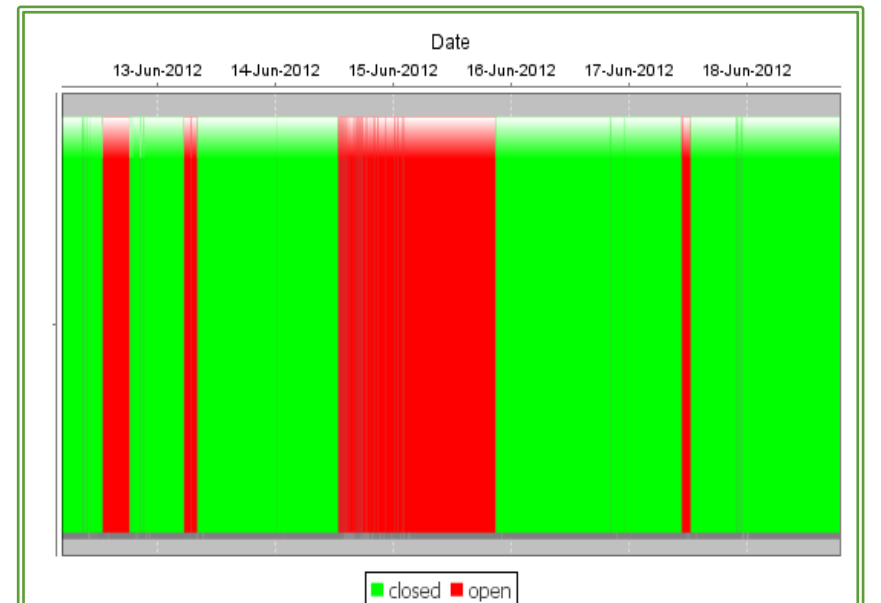
This is a haphazard and risky  
approach to reducing energy  
demand in buildings.  
Buildings would have to be  
overdesigned to ensure they  
actually meet targets.



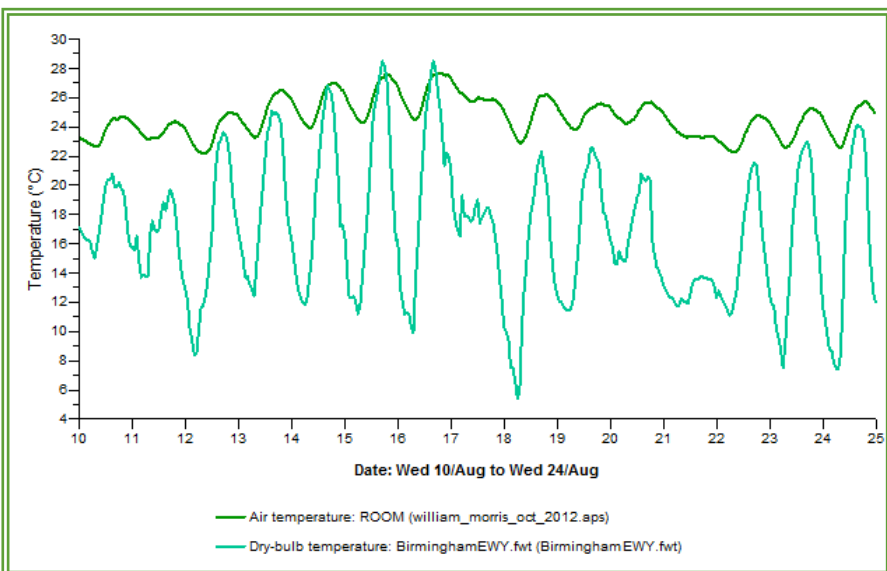
To consistently construct Low and Zero Energy Buildings, feedback about real building performance has to be collected, and incorporated into building models, design and construction.  
This is the aim of this work: to investigate means to reduce energy demand and overheating in modular dwellings by first understanding real performance.



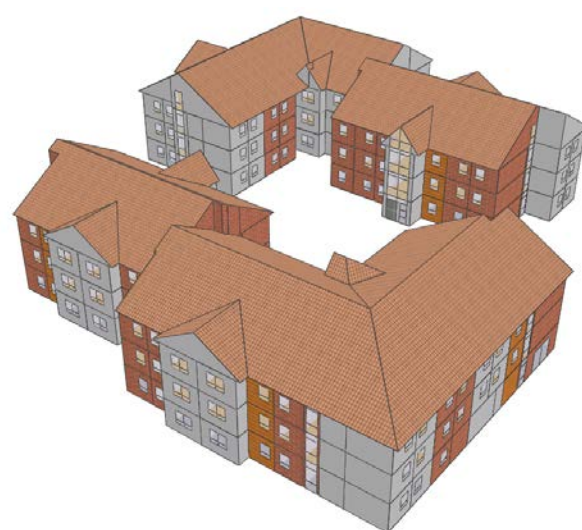
Electricity Consumption from Appliances:  
Loughborough Bedroom: 14<sup>th</sup> June 2012



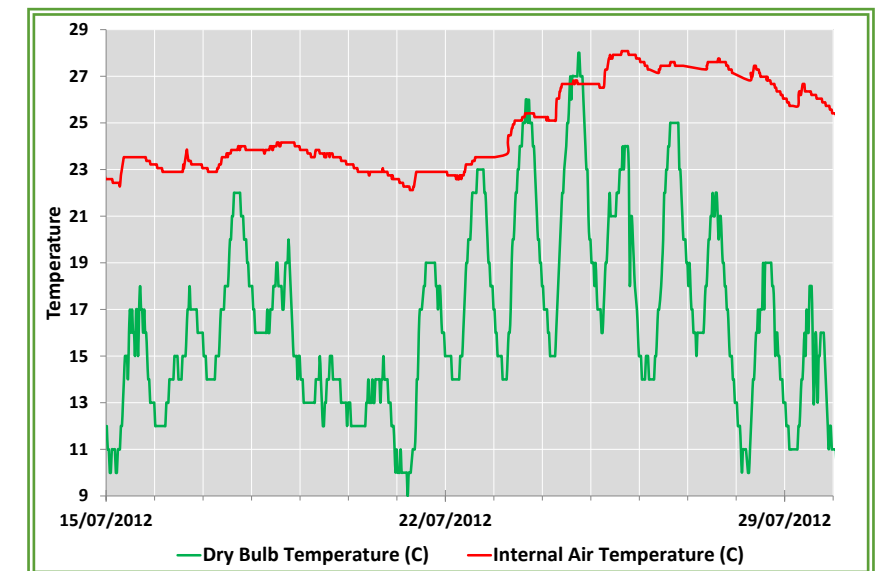
Window Opening Behaviour: Loughborough  
Bedroom: 13<sup>th</sup> – 18<sup>th</sup> June 2012



IES Simulation Results: Bedroom Internal Air  
Temperature & Dry Bulb Temperature: August



IES Model of Case Study Building:  
Loughborough



Internal Air Temperature & Dry Bulb  
Temperature: Loughborough Bedroom:  
15<sup>th</sup> – 29<sup>th</sup> July 2012