

# UK PASSIVHAUS AWARDS 2013

## No.3 Rayns Way Interserve Construction Limited



In 2009 Interserve Construction were working out of a 60 year old office, with cheap rents but the building was single glazed, poorly insulated, draughty and had an inefficient layout with no means of controlling the heating. The energy bills were increasing so fast that they exceeded the rental and continued to rise. The decision was taken to build a new office and negotiations took place with Raynsway Properties with the intention of designing and building a new office on their Watermead Business Park and then rent it. After the first year of occupation the energy cost has reduced from £23,300 pa to a £1,430 credit from the energy provider, there has been a 13% reduction in staff sickness and over 1500 construction professionals, clients and students have visited the office for CPD lectures in addition to all the Passivhaus Lectures delivered in the local Universities & colleges.



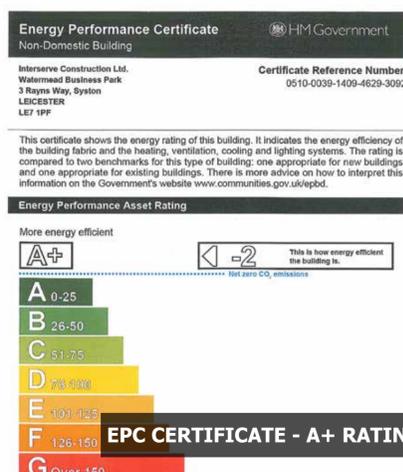
OFFICE ENTRANCE



MECHANICAL HEAT RECOVERY PLANT (MHRP)



INTERSERVE STAFF OUTSIDE THEIR NEW OFFICE



### Project Overview

Name: No.3 Rayns Way Passivhaus Office  
Location: Syston, Leicestershire  
Building Type: Office  
Construction type: Durisol Blocks/Precast Concrete Floors  
Completed in: September 2011  
Occupancy status: Occupied since September 2011  
Construction Cost: **£1,780/sqm**

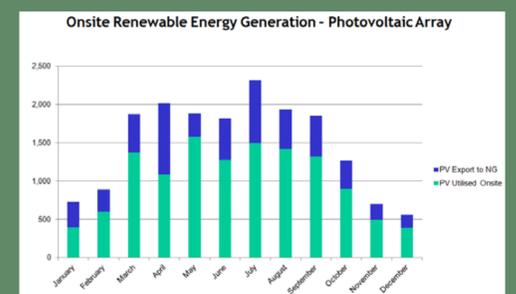
### Sustainability features

Primary Energy Demand: **98kWh/m<sup>2</sup>a**  
Heating and Cooling Load: **16W/m<sup>2</sup>**  
Ventilation strategy: Mixed Mode  
Heating strategy: Air Source Heat Pumps/ MHRP  
Shading strategy: BMS Controlled Levlux Blinds  
U values **W/m<sup>2</sup>K**:  
Roof: **0.130**  
Walls - Timber Rainscreen: **0.12**, Render: **0.11**,  
Soffit: **0.12**, Ground Floor Slab: **0.13**  
Windows: **0.68**

### Measured Performance

Headline energy results:  
2012 resulted in an overall credit from our energy provider of **£1430** for our energy expenditure resulting from the excess solar power generated from the panels on our roof. This represents a reduction in energy costs compared with our old office of almost **£25,000**, fully justifying the additional costs of Passivhaus construction compared to a BREEAM model.

Analysis of actual energy use:  
Better use of the solar power generated could be achieved by a greater use of LED lighting fed from a battery bank charged by the surplus energy produced.



Air pressure result: **0.44 ach**

### Occupant Feedback:

'We were surprised to realise that since moving to our Passivhaus office our staff sickness days have fallen 13% compared with our previous office. Assuming that this is repeated in schools and other commercial buildings it provides another demonstrable benefit of Passivhaus'  
*Andrew Howard - Regional Director*

'The tranquillity, light quality, and constant temperatures are a far cry from our old office where we froze in winter and roasted in summer in a dark and draughty old building.'  
*Daniel Murdock - Business Development Coordinator*

'The only way which we could afford to move to new offices was the Passivhaus route, the equivalent BREEAM may have delivered similar quality but would have cost a lot more to run. We have managed to move from a tired old office with massive energy bills to a wonderful new office where everyone enjoys the pleasant environment with negligible energy bills at no additional cost - No Contest!'  
*Gordon Kew - Regional Building Director*

### TEAM CREDITS

Client: Raynsway Properties Architect: CPMG  
Consultants: CPW Contractor: Interserve  
Certifier: WARM Structural Engineer: BWB

### Award Sponsored by

