

## The Warden INTEGER Home, Newbury, Berkshire

**Existing or Proposed Project:**

EXISTING – COMPLETED  
SPRING 2001



**Location:**

6, HEATHER GARDENS,  
NEWBURY, BERKSHIRE  
WARDEN HOUSING ASSOCIATION

**Project Leader:**

**Description:**

The house has been built to a 'best practice' specification with regards to energy efficiency and also features solar water heating and other leading edge technology features



### Background

Warden Housing Association were the funding agency for what has become the UK's first INTEGER home to be offered for commercial sale. Berkeley Homes were invited by West Berkshire Council to build one four-bedroom detached INTEGER house within a conventional development. The four bedroom house was completed in Spring 2001 and was let out to a family at market rates for two years. The family have monitored energy consumption and "live-ability" in the house in order to get real-time data on the performance of INTEGER homes.

The house is currently on the market for £450,000 and enquiries should be directed to Katie Chapman at Warden Housing Association on 01189 777604.

Warden Housing Association were commended for this project in the National HomeBuilder Design Awards 2003. The INTEGER Home was singled out for commendation by the judges in the Best House of the Future category.

## The Technology / Scope of Project

### Design and Construction Innovation

- Environmentally conscious and low maintenance construction materials, providing value throughout the lifetime of the building
- Pre-fabricated timber panel construction allows for less on site time, factory controlled quality is ensured, minimum waste is generated and low embodied energy is achieved in comparison with conventional brick and block construction
- Timber panels and associated boarding are cured in the factory, significantly reducing the amount of formaldehyde given off by the wood
- Wall cavities of 170mm allow significant space for recycled newspaper insulation
- Flexible room partitioning means living spaces can be adapted to meet the changing requirements of the occupants
- The glazing offers a good degree of solar performance. Coupled with the un-insulated conservatory floor, this creates a warm and attractive microclimate throughout the year
- All cabling and pipework within the house is hidden within a duct behind high-level removable access paneling allowing easy modifications or upgrades
- The structure of the walls and the topology of the cabling infrastructure means that electric sockets, points and controls can be positioned anywhere within the house with minimal disruption

### Environmental Technologies

- The highly insulated building loses less than half of the amount of heat than the maximum acceptable in the Building Regulations
- Passive stack ventilation maintains excellent air circulation through a combination of trickle vents, humidity sensitive extractors and a low-energy fan
- Solar water heating provides free hot water for domestic consumption, meeting 60% of the total annual demand
- A grey water recycling system cleans water which has been used for washing and bathing and then re-uses it for toilet flushing, providing annual savings on water consumption of up to 40%
- Energy-efficient white goods have been provided to the home to reduce energy and water consumption, while increasing convenience
- Lighting uses low-energy light fittings resulting in low carbon dioxide emission

### Intelligent Technologies

- The house is pre-wired with high-quality Category 5e cabling for data and voice,

and with satellite specification CT100 cabling for television. Pre-wiring provides the performance and future-proofing that the home of the future requires in the most cost effective way

- The cabling is an integrated structure originating from a single main connection centre on the ground floor, giving connectivity, communication and control wherever it is required
- The 10baseT and 100baseT data network means computers in every room can be connected to each other and to the internet. Capacity exists for the provision of extra ISDN or telephone services
- Entertainment within the home is comprehensive. Both analogue and digital satellite TV can be provided in every room in the house

### **Importance to the Thames Valley**

This house demonstrates cutting edge sustainable building techniques and should serve as a stimulus to other social housing providers and volume house builders when it comes to specifying for new homes. All the techniques are readily replicable within the Thames Valley and should be offered to the home buying and renting public. As the public becomes more demanding and understanding of these technologies, housing providers will be under increasing pressure to provide them.

### **Project Partners**

Client: Warden Housing Association

Employer's Agent: Waite Watson Associates

Design and Build Contractor: Berkley Homes

Design Consultant: Cole Thompson Associates

Intelligent Systems: i&i limited

Services Engineer: Oscar Faber

Structural Engineer: Anthony Ward Partnership